

CLAIMS

What is claimed is:

1. An apparatus useful with an entertainment system, the apparatus comprising:
 - a. a persistent data store having a plurality of storage locations to store a plurality of user preference data for a corresponding plurality of entertainment system users, wherein individual storage locations are dedicated to store user preference data for an individual system user;
 - b. a user detection system; and
 - c. a profile processor, communicatively coupled to the persistent data store and the user detection system, the profile processor programmed to:
 - i. automatically detect which users of the plurality of entertainment system users are currently within a predetermined viewing area; and
 - ii. automatically create a composite user profile, useful for generating a set of recommended entertainment options from a set of available entertainment options, the composite user profile being based on the profiles of each of the plurality of users currently within the predetermined viewing area.
2. The apparatus of claim 1 wherein the user detection system comprises a computer vision system, a voice recognition system, a fingerprint recognition system, a handprint recognition system, and an input device capable of transmitting at least one unique input.

3. The apparatus of claim 2 wherein the computer vision system identifies faces in the detected imagery.

4. The apparatus of claim 1 wherein the profile processor is further programmed to monitor interaction of users with the entertainment system, selectively store a predetermined portion of each interaction in a view history, and selectively retrieve interactions from the view history.

5. The apparatus of claim 4 wherein the profile processor is further programmed to:

- a. create at least one value relating to the view history of a user within that user's profile; and
- b. create a set of recommend viewing choices for the composite user profile based at least in part on each detected user's past viewing history for viewing choices similar to or the same as the viewing choices in those users' past viewing histories.

6. An entertainment system, comprising:

- a. at least one entertainment system component providing programming available to at least one user, the programming being received via at least one input to the entertainment system component;
- b. a persistent data store having a plurality of storage locations to store user preference data for a corresponding plurality of entertainment system users,

wherein at least one unique storage location is dedicated to store the user preference data for a unique corresponding system user; and

- c. a profile processor, operatively in communication with the at least one entertainment system component, the persistent data store, and a user detection system, the profile processor programmed to:
 - i. automatically detect which users of the plurality of entertainment system users are currently within a predefined viewing area;
 - ii. automatically create a composite user profile based on a profile for each of the plurality of users currently detected within the predefined viewing area; and
 - iii. dynamically adjust operating parameters for the entertainment system in response to the composite user profile.

7. A method for creating a composite user profile for a plurality of users, the method comprising:

- a. automatically detecting which of a plurality of users are currently within a predetermined viewing area;
- b. determining an identity for each of the detected plurality of users;
- c. for each identified user,
 - i. comparing the user's identity against a first predetermined portion of user data stored in a persistent data store; and
 - ii. retrieving a second predetermined portion of user data from the persistent data store for each user with a user profile stored in the persistent data store; and

- d. creating a composite user profile from each of the second predetermined portions of user data.

8. The method of claim 7 further comprising creating a set of recommended entertainment options based on the composite user profile from a set of available entertainment options.

- 9. The method of claim 7 further comprising:
 - e. accumulating a view history for each detected user, the view history comprising positive entertainment options;
 - f. creating a composite view history from the accumulated view histories, the composite view history comprising positive entertainment options;
 - g. adjusting the composite user profile using the positive entertainment options in the composite view history wherein each positive entertainment option in the composite user profile reflects a sum of occurrences of that positive entertainment option in each of the individual user's profiles;
 - h. generating negative entertainment options for each positive entertainment option in the composite user profile;
 - i. determining which entertainment options available in a predetermined time frame are positively rated by the composite user profile; and
 - j. generating a composite score for each positive entertainment option and negative entertainment option in the composite user profile.

10. The method of claim 7 wherein a user profile may be generated by an individual who has authority to generate a user profile for users who are present but who have no profile.

11. The method of claim 7 further comprising:

- e. creating a composite view history to reflect each view history stored in the stored user data for each user identified;
- f. generating a set of positive entertainment options from a set of available entertainment options for that available entertainment options that meet or exceed a predetermined threshold value of positive entertainment options in the composite view history; and
- g. generating a set of negative entertainment options by sampling the set of available entertainment options that do not meet the predetermined threshold value of positive entertainment options in the composite view history.

12. The method of claim 11 wherein step (g) further comprises using a uniform random distribution to create a set of negative options.

13. The method of claim 11 further comprising:

- h. allowing a user to select an entertainment option from the set of positive entertainment options; and
- i. preventing selection of an available entertainment option for entertainment options that are members of the set of negative entertainment options.

14. The method of claim 13 wherein step (i) further comprises restricting negative entertainment options to those that occur within a predetermined time frame.

15. The method of claim 11 wherein step (f) further comprises using an adaptive sampling technique to select entertainment options from all available entertainment options such that the selected entertainment options match preferences in the composite user profile within a predetermined range.

16. The method of claim 11 further comprising:

- h. generating entertainment option recommendations based on available entertainment options and the set of positive entertainment options using implicit selection techniques, explicit selection techniques, feedback selection techniques, or a combination thereof.

17. The method of claim 16 wherein the implicit selection techniques comprise capturing users' entertainment option selection patterns and generating entertainment option recommendations based on a composite of the users' entertainment option selection patterns.

18. The method of claim 16 wherein the explicit selection techniques comprise having the users explicitly input each of the user's entertainment option preferences and generating entertainment option recommendations based on a composite of the users' explicit entertainment option preferences.

19. The method of claim 11 further comprising:
- h. capturing users' entertainment option selection patterns;
 - i. accepting at least one of the users' explicit input of the user's entertainment option preferences; and
 - j. generating entertainment option recommendations based on a composite of the users' entertainment option selection patterns and on a composite of the users' explicit entertainment option preferences.
20. The method of claim 11 wherein step (e) further comprises:
- i. generating scores for each of the detected users from each of the detected users' profile data; and
 - ii. combining the detected users' profiles using the generated scores.
21. The method of claim 20 wherein each user's individual user profile may further comprise a weighting factor such each detected user's preferences are weighted independently from other users detected in the viewing area when generating scores for the detected users from each of the detected users' profile data.
22. The method of claim 21 wherein the weighting factor can vary as a function of time of day or calendar time.

23. The method of claim 11, further comprising:
- h. rating available entertainment options for a predetermined time frame against each of the previously created individual profiles of each user detected in the viewing area; and
 - i. presenting only entertainment options that meet or exceed a predetermined rating threshold in each of the previously created individual profiles of each user present in the viewing area.

24. In an entertainment system including a program processor operatively connected to a persistent data store, a program output device, an audio input device, a user detection device, and a video input device, a method for automatically configuring the entertainment system for an plurality of identified system users, the method comprising:

- j. detecting which users from the plurality of identified system users are currently within a predetermined viewing area;
- k. determining which of the detected users have user preference data stored in the persistent data store;
- l. retrieving the user preference data corresponding to each of the detected users from the persistent data store for those detected users having profiles in the persistent data store;
- m. creating a composite user profile using the retrieved user preference data;
- n. scanning programming information for available entertainment options which match the composite user profile within a predetermined range of matching values; and

- o. adjusting the entertainment system in accordance with the composite user profile and available entertainment options.

25. A computer program embodied within a computer-readable medium created using the method of claim 7.

26. A computer program embodied within a computer-readable medium created using the method of claim 24.